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A LETTER

TO A

Gentleman in EDINBURGH,

CONCERNING

Mr. GRÆME of *Argomery*'s Improvements of Moss, and the Benefits of these Improvements to the Nation.

EDINBURGH:

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ROMANA

SIR,

IT is with great pleaſure that I comply with your deſire, and give you my opinion, with a ſhort account of the improvements of moſs carried on by Mr. *Græme* of *Argomrey*, on the weſt ſide of *Stirling*. Your deſiring this would be a ſufficient motive to me, tho' I had not any other. But I confeſs I have a farther view than that of gratifying your curioſity. I would gladly recommend this attempt of Mr. *Græme* to your patronage and protection, that as a public-ſpirited man, and a man of influence in this country, you may take the proper methods of encouraging an undertaking, which, in my opinion, is extremely uſeful, and deſerves the higheſt encouragement. After you have read this letter, if you ſhall think that it may be of any ſervice to make it more public, I freely conſent, and give you full liberty to publiſh it in what manner you think beſt.

You know very well how difficult it has been commonly thought to improve the moſſes in *Scotland*; that it has been generally looked on as impoſſible, in any other way

than by draining them ſo deeply, and getting ſo much to the bottom of the moſs, as was judged impracticable without an expence too great for private hands. An opinion of this kind, and the common methods uſed in rendering our moſſes proper, either for tillage or paſturage, have been the occaſion of the ſlowneſs of our improvements of this barren ſoil. Very little has been done hitherto, and our improvements of moſs have not been anſwerable to what we have made in our other grounds. But Mr. *Græme* has at length taught us to improve theſe barren fields to as great advantage, and with as little, or rather with leſs expence, than others; and thus hath laid open a ſcene of plenty and riches unknown to our forefathers.

It was early in the year 1750 that Mr. *Græme* began this huſbandry; he has been carrying it on ever ſince, and has at laſt brought it to no ſmall degree of perfection. He has not indeed been able to do this without a great variety of experiments, of different ſorts, and a conſiderable expence to himſelf: nothing elſe could have been expected. His progreſs has been the more ſlow, that the ſeaſons were not always favourable; but he ſeems

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at length to be in a fair way of overcoming all difficulties, and hath both found out, and ſet us an example of the eaſieſt and cheapeſt methods of improving our moſſes.

When Mr. *Græme* firſt entered upon this deſign, as has often happened to the inventors of the moſt uſeful arts, he was laughed at by the whole country, and the deſign was ſaid to be utterly impracticable. Many could even demonſtrate that it was impoſſible for him to ſucceed, and made this a frequent ſubject of their converſation. You know how diſcouraging this is. But Mr. *Græme* bore every thing with patience; he went on with his deſign notwithſtanding theſe pretended demonſtrations; he had conſidered his undertaking very maturely before hand; he made a variety of experiments; if one method did not ſucced, he had recourſe to another. Thus his improvements gradually advanced; every ſeaſon cauſed an alteration to the better; theſe moſſy fields, which had been ſo long barren, began to produce wheat, barley, potatoes, and lint, all good of their kinds, and in a large quantity; his project has ſucceeded wonderfully; and he has not only overcome the difficulties which ariſe from the nature of the

the ſoil, but, which may be reckoned a greater victory, he has gone a great way in overcoming the prejudices that had been entertained againſt his undertaking. Many have opened their eyes: at firſt they would ſcarce take the trouble of looking at his fields; but now they begin to be convinced that his ſchemes are practicable; and ſome who had gone fartheſt in ridiculing them, are at laſt become the greateſt admirers of this uncommon huſbandry.

I am not, I would not wiſh to be thought a projector. You know that I have rather a ſceptical turn, and have been apt to doubt in caſes when many others have been convinced. I incline much to the method of experiments in natural philoſophy; it is dangerous to truſt much to theory; 'tis by experience alone that we can attain to the real and certain knowledge of nature. Agriculture is a part, nay one of the moſt uſeful parts, of natural philoſophy; it is by frequent trials that we can gain a maſtery in this noble ſcience, and be fully inſtructed to cultivate and ſubdue the earth. I do not ſay that it will not require more experiments than Mr. *Græme* has had time to make hitherto, to

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carry his improvements to the higheſt pitch: but I do ſay, that he has gone very far, and done a great deal already; he has ſet the gentlemen and farmers of *Scotland* a fair example, and they have great reaſon both to encourage him and to imitate him. I was not eaſily convinced of this; but I am convinced of it now. I deſpaired of his ſucceſs for a couple of years and longer; but after ſurveying his fields at different ſeaſons of the year, and converſing with the gentleman himſelf, and the workmen whom he employs in labouring his moſs, I cannot but be perſuaded, that his improvements will turn to good account.

I do not propoſe in this letter to give you a full and minute account of his method of huſbandry, and the inſtruments he makes uſe of. I ſcarce reckon myſelf able for the taſk; beſides it would be tedious, and, in a great meaſure, uſeleſs. If you, or any other gentleman, want to be fully inſtructed in this ſort of agriculture, you will know it much better by going to theſe fields, by ſurveying every thing yourſelf, and converſing with Mr. *Græme* and his labourers. None can inform you ſo well as Mr. *Græme* himſelf; none will

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be more willing to do it. He has been thinking of this ſubject continually for ſeveral years; he has ſeen the different turns that every thing has taken, and may be very uſeful to any gentleman or company who propoſe to undertake a work of this kind. I ſhall only give you a general view of his methods; but propoſe to be a little longer and more particular in ſhewing how ſucceſsful he has been, and what great profit muſt ariſe to this part of the iſland, from this new kind of agriculture.

In every field which Mr. *Græme* intends to labour, he makes only a few ſmall ditches for drains, three feet deep. This work is eaſily done. He pairs his field: he covers it with earth which he brings, by an eaſy carriage, from the adjacent grounds; or, if theſe grounds are too diſtant, and render the carriage too expenſive, he gets earth enough by digging in the moſs itſelf; he mixes this earth with aſhes, which he purchaſes eaſily, by burning the moſs; he can burn his moſs both in winter and ſummer, and both in dry and wet weather. He hath found out a curious method of keeping *in* his fires; ſo that we ſee his moſſes burning in the moſt rainy ſeaſon;

ſon; he can work in his grounds all the winter round; in froſt he can lay earth upon them; when there is no froſt he can plow them. It ought in particular to be obſerved, that he can plow ſafely both in wet and dry weather; nay ſometimes it is an advantage to plow wet, becauſe the breaſt-plough can then eaſily plow deep enough, as the men's feet and the roller break the moſs, the earth mixes freely with it, the field is made ſmooth by rolling, and the mould is brought into a proper conſiſtency. Conſtant tillage impoveriſhes other, but greatly meliorates a moſſy ſoil, makes the mould firmer, and renders it more fruitful. In general, his breaſt-plough, his harrows, his rollers, and all his inſtruments, are ſuited to the nature of his ſoil and labour, and can be eaſily purchaſed; he needs not any ſtock of cattle either for dung, or for labour; he can do all his work with men, without horſes or oxen; a ſingle man puſhes his breaſt-plough eaſily before him: he needs not lay out money for dung or lime; nor is he obliged to expenſive carriages; the materials for manuring his grounds are all at hand; he wants nothing but aſhes and earth, which are within his grounds,

or hard by them, and coſt him nothing but a very cheap and eaſy labour. In ſhort, this is the only ſoil in *Scotland* which the farmer can make as rich as he pleaſes, ſolely by his labour, without giving any money out of his pocket, or going from his own grounds for materials: it is almoſt the only ſoil which he may bring to what conſiſtency he pleaſes, according to the different grains which he intends to ſow. 'Tis a ſoil which he may be ſaid to create, and make wholly to his own mind.

How much preferable, in ſome reſpects, is this to the common ſcheme of huſbandry, and how much leſs expenſive! A very ſmall ſtock is ſufficient for ſetting up a farmer in this new way; the other requires cattle, both for obtaining dung and for labour; when his cattle die, the farmer is often ruined, or greatly impoveriſhed; he muſt pay dear for lime, and the carriage of it is often very expenſive. By converſing with Mr. *Græme* and his workmen, I have been aſſured, that an acre of moſs can be effectually dreſſed at the higheſt rate for forty Shillings *Sterling*, of which twenty Shillings go for digging and laying on the earth, ten for pairing, five for burning,

ing, and five for extraordinary charges. This is the very higheſt eſtimation; for I have been well aſſured, that ten ſhillings may generally be deducted, and an acre be well prepared for thirty ſhillings; nay that a farmer, working it wholly by his hired ſervants, may labour it for twenty five. The expence of preparing effectually an acre of our other uncultivated, commonly called OUTFIELD-grounds, which yield three crops of oats in ſix years, is much greater. If the ſoil is clay, we allot five chalders of lime to each acre; lay on earth as thick as on the moſs. It is alſo dunged and plowed oftner than once. In the dry fields and lighter ſoils, we are obliged to uſe much the ſame culture; only we think three chalders of lime ſufficient. So, on a juſt calculation, it will be found, that the expence of cultivating theſe other barren ſoils is double, and in the clay grounds can ſcarce be computed at leſs than five pounds, or four pounds, ten ſhillings for every acre.

You will perhaps think, that theſe other grounds being once well prepared, are kept longer in heart; by which, and by the better crops which they yield, the farmer will be

re-imburſed for his greater expence: but this will not be found to be the caſe. Mr. *Græme* has had as good crops on his moſſes, as moſt of the grounds around them are capable of yielding. Theſe moſſy fields produce good crops, not only of oats, peaſe, the common bean, but of barley and wheat; they yield potatoes and rape; I have ſeen both good clover and natural graſs upon them; and after two or three years culture, they bear good turnips. Moſt of his acres of wheat and barley, may be computed to produce ſeven, and ſome of them eight bolls. The grain too is as heavy, or heavier than in any of the fields around. This has been proved by ſeveral trials and experiments. The crops of potatoes are plentiful, and the potatoes good. Affidavits were made laſt year by the workmen, who planted and raiſed the potatoes, that generally they digged between ſixteen and twenty ſix good ſaleable potatoes from the root of one ſtalk. An acre right dreſſed will yield thirty bolls. This is a very good increaſe.

NEITHER does moſs cultivated in this manner immediately run out; tho' I have heard this ſtarted as an objection, ſufficient to

to diſcourage all attempts of this nature. It is well known, that, in order to have even but tolerable crops of barley, oats and peaſe, in a conſtant ſucceſſion upon our other grounds, they muſt be kept in heart by a repetition of earth and dung every third year: elſe they will not hold out to advantage. Now, if the moſs be refreſhed with earth and aſhes every third year, I am ſincerely of opinion, that it will hold out longer, and improve every year by the tillage. It is true, that there has not been time hitherto to prove this by experiments, beyond the poſſibility of cavilling; yet it ſeems highly probable both from the nature of the thing, and from the more imperfect trials which have been already made.

But I muſt not omit what deſerves our moſt ſerious attention, and is perhaps of chief conſideration, that theſe moſſy grounds, as improved by Mr. *Græme*, are found to be an excellent ſoil for producing lint, and thus ſupporting and improving our linen manufactures, which are of ſo great conſequence to this nation. Within theſe laſt thirty years, we have not only given a beginning, but have made conſiderable advances in this manufacture.

manufacture. During a year or two backwards, it has been loudly ſaid, that it is rather on the decline. I hope this is not true; and have good authority to ſay, that a greater quantity of linen, and of a greater value, has been ſtamped during the year preceeding *Martinmaſs* laſt, than any of the former. But let this be as it will, if there is any truth in it, it muſt be owing, in ſome meaſure, to the ſcarcity and dearneſs of the lint; from which it follows, and indeed it muſt be true at any rate, that it will be a very great advantage to raiſe up as much lint as we can, and of all the different kinds which are neceſſary for the manufacture. Now Mr. *Græme* has both found out a proper ſoil, and taught us the proper methods of raiſing different ſorts of lint upon this ſoil. He can raiſe lint either courſe or fine. If he wants ſtrong rank lint, he plows the ground very deep, lays a greater quantity of earth upon it, and a great deal of aſhes; harrows them well; then plows his fields half as deep as before; after which he ſows *Riga* lintſeed thin. If he wants ſhorter ſmall ſtalked or fine lint, he does not plow ſo deep, gives leſs aſhes, and ſows *Dutch* lintſeed thick. He has raiſed of both kinds,

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eſpecially the courſe, which is moſt wanted, and is perhaps moſt profitable for this country. His lint looks well, is of a ſufficient length, has ſatisfied the lint-dreſſers, ſpinſters, and weavers, in this part of the country, who have tried it. Its goodneſs has alſo been atteſted by the lint-dreſſers about *Edinburgh*. What reaſon have we to think that it will not prove as good as other lint which looks no better. 'Tis natural to conceive, that a compoſition of earth, moſs and aſhes, duly mixed, is a ſoil very proper for vegetation. It is certain, that the aſhes of moſs laid upon earth make a fruitful mould. It is agreed, that a black loamy ſoil is the fitteſt for producing lint; and ſuch ſoils are always ſought out for this purpoſe. Now, this is the very ſoil Mr. *Græme* hath found out; and thus his diſcovery ſeems to be agreeable to general experience.

THESE obſervations concerning the advantages of raiſing lint in this new method, lead me naturally to conſider, that this huſbandry may be rendered extremely uſeful for baniſhing idleneſs and theft out of the Highlands, for improving and civilizing them, and for introducing induſtry and plenty. Nothing is more

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wanted, nor of greater advantage; nothing ſeems to be more at heart with the legiſlature. A great deal of money has been moſt wiſely expended for making good roads and for ſurveying the Highlands; uſeful maps have been drawn, after ſurveys made, with great care and exactneſs. Many excellent laws have alſo been framed for civilizing this uncultivated part of our country, and making its inhabitants taſte the ſame freedom and independence which is enjoyed by the reſt of the *Britiſh* ſubjects. Among others, I cannot but take notice, with a particular pleaſure, of the late act, annexing certain forfeited eſtates to the Crown; if this act ſhall be carried into execution, according to its true meaning and intent, it will be of greater ſervice for civilizing the Highlands, than any thing that has been done hitherto. Care has likewiſe been taken, to place different bodies of the army, in proper ſtations, for reſtraining theft, and for repreſſing diſorders. Never perhaps were our ſoldiers better employed in times of peace; and, as they have done their duty, they have been very uſeful. In ſhort, no expences have been ſpared to lay a foundation for improving this barren part of the iſland. All this tends great-

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ly to his Majeſty's honour, and the honour of the legiſlature and adminiſtration. All is neceſſary and wiſely adapted for preſerving the peace of the united kingdom, for reſtraining the turbulent temper of the Highlanders, for preventing them from breaking out into inſurrections and rebellions, and from making inroads into the low countries in *Scotland*, or into *England*. How much did they diſturb the whole iſland by their laſt rebellion, and what vaſt ſums have they coſt the nation!

At the ſame time, thoſe who know the Highlanders beſt, know very well that they are as ingenious and as tractable, in many reſpects, as other people; their faults have ariſen rather from neceſſity than choice; and the blame ought not ſo much to be laid on thoſe of lower, as on thoſe of higher rank, who have taken ſo little care to introduce better cuſtoms, nay, have connived, and perhaps encouraged them in bad ones, and often kept them in downright ſlavery. They have but few ſpots very proper for tillage; paſturage has been their chief employment; this requires many fewer hands than the other: thus they have been accuſtomed and bred

bred to idleneſs; and multitudes among them having nothing to do, this has led them to ſtealing and robbing, and rendered them ſo turbulent.

Now as it is univerſally agreed, that the introduction of induſtry among them is the beſt method of curing theſe evils, what ſort of induſtry can be more proper than raiſing lint from thoſe moſſy vallies that are ſo common at the bottoms of their mountains? They have but little ſoil fit to produce corns; none of it can well be ſpared for any other uſe. A few dry ſandy hills, which might bear fine lint, ought rather to be kept for corn; many of the moſſes, on the tops of the hills, can yield but little on account of the ſeverity of the climate, and the frequent fogs and rains; if they can be made more uſeful, it will be chiefly by producing better crops of graſs. But the moſſes, at the bottoms of the hills, are fit for bearing courſe lint. This is moſt neceſſary for them at firſt, as they muſt be firſt taught to manufacture the courſer before the finer lint, and perhaps the courſer is moſt profitable in general. They have not money to buy lint from other places; but they may raiſe it by their own labour in their own grounds,

grounds, and what they raiſe in this manner, they will be more eaſily prevailed on to manufacture, than what they may conſider as a foreign commodity. In theſe moſſy vallies they may alſo raiſe abundance of potatoes; and after they have prepared a greater quantity of moſs than is ſufficient for lint and potatoes, they may employ the overplus in raiſing corns. This ſort of huſbandry is the moſt proper for them on another account, ſince they can labour theſe moſſes with the ſmalleſt horſes they have, or by men intirely, without any cattle at all. This laſt circumſtance is of great conſequence in their caſe, as their proviſions are ſo ſcanty, and they can ſpare ſo little from their own ſuſtenance, for the ſupport of labouring horſes.

If a ſcheme of this nature were purſued, how ſoon might induſtry be introduced into the Highlands? An acre of ground in lint, by the various manufacture it requires, will give employment, and furniſh bread to more people, than five acres in grain, tho' the beſt in the kingdom. This ſort of agriculture will be moſt eaſily introduced at firſt into the forfeited eſtates which are veſted in the Crown. The poſſeſſors of theſe eſtates will

have more advantages, and greater encouragement to improve their grounds than moſt others. The commiſſioners and truſtees for managing theſe eſtates will have it in their power to do great ſervice in this way, by a proper choice of perſons, to whom they ſhall grant leaſes and by other ways. If fifty or a hundred of the army who knew huſbandry beſt, and had ſeen the beſt methods of improving lands, were ſettled in different parts of theſe eſtates, they might become very uſeful: ſeveral of them have ſeen different countries and cuſtoms, have been well inſtructed in agriculture, and were good workmen before neceſſity or choice or a frolick engaged them to enliſt; ſome of them who are married, and have become wiſer, might perhaps be willing to ſettle in this manner; if they are married to *Engliſh* women, ſo much the better; ſuch women might ſet examples before their neighbours, and teach them leſſons that were never known in the Highlands. A mixture of different people and different cuſtoms tends to civilize any country. In this manner alſo the *Engliſh* language would be much more ſpeedily propagated. From theſe tenants of the Crown, induſtry would ſpread among

among the other inhabitants. It would be natural for poor ſtarving Highlanders, or ſuch as were oppreſſed by their landlords and cheiftains in other parts of the Highlands, to fly to ſuch places for bread and liberty, or to wiſh to be as near them as poſſible: thus induſtry, plenty, and liberty would inſenſibly be ſpread over all the Highlands.

WHAT has been ſaid, I hope, is ſufficient to convince you, that this attempt by Mr. *Græme* to improve our moſſes after a new manner, is very uſeful, and ought to be duly encouraged; we have many, and very extenſive moſſes in *Scotland*; a very conſiderable part of the country is covered with them; we have much more ground of this kind than is neceſſary for ſupplying ſuch as live near it with fuel. This is almoſt the only uſe to which our moſſes have been applied hitherto. What large tracts of them have been entirely neglected, as incapable of any improvement? Let us not always go on in ſuch a criminal neglect. What a different face would it give to the country, were theſe vaſt barren fields reduced to good arable, or paſture grounds? This would increaſe the bulk of the iſland, add a great quantity of good

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ſoil to it, augment the wealth of the proprietors of theſe moſſes, find employment and provide food for thouſands, and greatly increaſe the national ſtock and riches.

I know that it has been objected, that we have commonly a ſufficient quantity of grain in *Scotland* for maintaining the inhabitants; that we have often even more than enough; that grain is often too cheap; that its cheapneſs impoveriſhes both the landed gentlemen and the farmers, and only ſerves to make the poorer ſort inſolent and idle, and by this to prevent the more ſpeedy increaſe of uſeful manufactures: this has been often ſaid, and in ſome caſes not altogether without reaſon. Undoubtedly, if in any year, thro' ſcarcity of grain, we are obliged to ſend *L.* 50,000 to another country for purchaſing what grain we want at home; this will be an advantage, provided this dearneſs and ſcarcity will be a ſpur to as much more induſtry as will produce goods to the value of *L.* 100,000. In this ſenſe, plentiful crops and improvements of lands may be a diſadvantage, and prevent other improvements of greater value. A diſcuſſion of this ſubject might lead one to a long argument, and would be too long for this

this letter. After all, it is not a little difficult to fix the preciſe proportion, and determine exactly when we ought to employ more hands in new improvements of our lands, and when in other kinds of manufacture. This, to be ſure, is a nice queſtion, and perhaps on the whole muſt be left undecided, and things muſt be regulated by particular, and not general rules.

However, in general, improvements of lands and plentiful crops are an advantage; or if they are not, the policy of the country muſt be bad in other reſpects. In general, cheapneſs of proviſions is not only a very great bleſſing to the poorer ſort, but muſt have a happy influence, by incouraging marriages, to encreaſe the number of the people, in which the ſtrength of a nation conſiſts. In the preſent condition of *Britain* and *Europe*, there is frequently room for exporting grain out of *Britain* to other countries; which is an advantageous trade. Were our policy good in every reſpect, we could never have grain too cheap, nor in too great a quantity. We have lately had ſome very ſcanty crops in *Scotland*, and have been obliged to import grain

grain at a great expence,* to the detriment of our manufactures; nor do we ſeem at preſent to be in any danger of having our lands too much improved, or having too great a quantity of grain; we are rather in danger of not having enough, and agriculture does not keep pace with our manufactures of another nature; this muſt be the caſe, if our inhabitants are increaſing in number, which at leaſt ſeems probable. It is true, we have plenty of other barren or *outfield* grounds to be improved beſides moſſes; nay, moſt of our beſt fields may be improved to a greater value: but why ought we not to improve all our grounds in the beſt manner we can? Why leave ſuch vaſt tracts of moſs, that are capable of improvement as well as other ſoils, wholly barren and uſeleſs? Why ſhould we not enter into companies for improving our moſſes, and raiſing lint out of them, as we eſtabliſh companies for managing the whale fiſhery, for making ſugar, and carrying on other branches of trade and manufacture? Why ought not landed or monied men to ſubſcribe in theſe companies as well as they do

* I have heard it computed, that, in ſome years lately, a greater ſum than 200,000 *l. Sterling* has gone out of *Sotland*, on this account.

do in others where their money is not more ſecure, and will not yield greater profits? At leaſt, why ſhould not landed gentlemen who have large moſſes within their eſtates, and whoſe other lands are tollerably improved, attempt an improvement of their moſſes, and thus increaſe the value of their own eſtates, and the riches of the country? Eſpecially ſince the improvement of moſs is cheaper and more advantageous than of many other grounds (as has been already ſhewed): ſince moſs rightly prepared is the beſt ſoil for bearing all ſorts of lint, courſer and finer; and ſince this kind of agriculture would be ſo uſeful in civilizing the Highlands. At any rate, if we ſhall improve our moſſes for producing grain, we may give time to our other grounds to reſt: as theſe fields are worn out by conſtant tillage, and yield ſuch poor crops, this is one great cauſe of the poverty of the country: but, by giving them time to reſt, we ſhall have much better paſturage, by which, and by plentiful crops of potatoes in our moſſes, which they are very capable to yield, we ſhall be able to feed and fatten many more cattle; and thus, in a ſhort time, be able to change that poor diet of oat meal, on which

which ſo many of our people live, and feed them as eaſily with butter and cheeſe, beef and pork, which will render them ſtronger for labour *.

WHAT pity therefore that ſuch an uſeful attempt ſhould not be effectually purſued, and that Mr. *Græme* ſhould not meet with all due encouragement! I look upon him as a great benefactor to the country: what can be of greater benefit than to drain our bogs and marſhes, improve our barren grounds, and by various experiments, made at his own expence and riſk, teach us right methods of agriculture. He hath invented a new ſcheme, and brought it to ſuch perfection as leaves no bad examples to be followed; this is of no ſmall advantage in huſbandry, as bad methods have been greatly prejudicial to agriculture, and the commons of every country are too apt to follow even the bad examples of their forefathers: at the ſame time, others will

* Nothing puts fleſh more quickly on hogs and bullocks than boiled potatoes, with a handful of oats, broken in the mill. An acre well dreſſed and planted with potatoes, will yield 30 bolls, which will fatten 30 hogs: a crop of potatoes meliorates the ground, and is one of the richeſt crops our ſoil can yield.

will be able to do the ſame, nay much greater things than he has done, at much leſs expence. When he entered upon this undertaking, of raiſing good grain and lint from our deep moſſes, he met with many diſcouragements; particularly from want of hands. 'Tis natural for the commons in every country to adhere ſtrictly to the cuſtoms of their forefathers, and to deſpiſe all new improvements. It was not without great trouble and expence, that he could at firſt engage them to work for him and follow his directions. They begin now to conceive better hopes of his deſign, and to be more eaſily managed. However, he is ſtill put to much trouble, and is at great loſs for want of hands; his workmen too often leave him, when they can get other buſineſs to which they have been more accuſtomed; they deſert him at improper times; when he ſtands moſt in need of their labour, they would force him to heighten their wages. What pity the public ſhould not fall on ſome method to ſupport him, and enable him to carry on his uſeful undertaking more eaſily!

THUS Sir, I have complied with your deſire, and given you my ſentiments of Mr. *Græme*'s improvements of the deep moſſes in this part of the country. I can aſſure you further, that theſe are not my ſentiments alone, but the ſentiments of a great many in this neighbourhood; and that they are prevailing every day. The good appearances of his fields this ſeaſon have convinced many *. And that you may not reſt ſolely on my opinion, I ſhall conclude this letter with two papers ſubſcribed by ſome gentlemen in the ſhires of *Perth* and *Stirling*, by which you will ſee the opinion of ſeveral who are well ſkilled in agriculture: and as the gentlemen of this county, at their quarter ſeſſion, have lately appointed a committee of their number to viſit theſe fields and improvements, and to report their opinion; I have no doubt but you will ſoon ſee the advantages of Mr. *Græme*'s undertaking atteſted in a more public manner. I am,

SIR,

Your moſt humble ſervant.

STIRLING, *May* 1.

1754.

* The appearances at preſent are much better than in the preceeding years: no fields within three miles look ſo well.

October 2d, 1753.

COPY of a Letter and Memorial to the Truſtees of the Linen Manufactures; from ſome Gentlemen of *Perth-ſhire* and *Stirling-ſhire*.

WE, whoſe names and deſignations are under-written, gentlemen of the weſt end of the ſhires of *Stirling* and *Perth*; conſidering the advertiſements publiſhed in the *Caledonian Mercury*, and *Edinburgh Evening Courant*, by the truſtees for encouraging the linen manufactures in *Scotland*, inviting people to give their opinions anent improving the Highlands, raiſing flax therein, and ſpinning and manufacturing that flax; and as we have often conſidered thoſe points, and are fond to contribute as far as in us lies to ſo good purpoſes, we offer the following conſiderations upon that ſubject:

FIRST, That reſtraining theft and idleneſs is moſt eſſential, in which many good methods are now uſed, and ſeem in a fair way to cure thoſe diſtempers: but this

of

of itſelf wont do the buſineſs. The country is poor, and the people have nothing to do. At the ſame time that theft and idleneſs is diſcouraged, ſomething muſt be held out for them to do, ſome employment by which they can get bread: the one facilitates the other; giving them ſome profitable employment, withdraws them from ſtealing; and puniſhing theft, forces them to that employment put in their hands.

The people near the ſea-ſide may be employed in fiſhings very profitably: but the inland countries, by far the moſt extenſive, muſt be managed another way; they have few fields fit for much huſbandry, and as few cattle fit for labour, or food to maintain the labouring cattle; and therefore any huſbandry that would require much ſtocking or labouring cattle, would, from the above reaſons, be very ſlow in its progreſs, and very uncertain in its ſucceſs.

This naturally leads us to mention a novelty in huſbandry, lately begun in this corner of the country; the labouring and cultivating moſs with few or no labouring cattle, doing moſtly by men, as cheap, if not cheaper, than moſt other ſoils are laboured with cattle.

cattle. But before entering upon this method of huſbandry, let us ſuppoſe, that the extenſive moſſes ſo frequent over *Scotland*, were in meaſure equal to a tenth part of the arable ground in the kingdom; what an addition would that make to the wealth and induſtry of *North-Britain*, what hands would it employ, and how many mouths would it furniſh bread to, if it could produce good grain, inſtead of yielding nothing! But for the Highlands, they have little other ſoil in moſt places; only hills, with moſſy vales at the bottoms: if thoſe moſſy vales, at the bottoms of the hills, could be cultivated, ſo as to produce good flax and potatoes; it would give bread and employment to moſt of the Highlands at once.

Now, after this ſuppoſition, to reſume the moſs huſbandry, Mr. *Græme* of *Argomrey*, one of the Juſtices of the Peace of the county of *Stirling*, is the man that has begun and carried on this huſbandry for a few very wet years, and ſtood the railery and ridicule of moſt of the country for ſo whimſical an attempt. Few people would give it the countenance to go and look at it; as novelties are always run down at firſt, and the weather

weather very unfavourable for people to creep into thoſe wet fields: but, now that there has been a pretty dry ſeaſon, we have reviewed theſe bogs and that huſbandry which we were prejudiced againſt, or had no opinion of its ſucceſs, and have been ſurpriſed as much as we can expreſs, and which nothing but ſeeing with deliberation could have convinced us of. We have ſeen large fields of fine barley and bear, in the quality of the pickle, exceeding any we have ſeen this ſeaſon; that moſt of thoſe fields, except two, we eſtimate at eight bolls the acre, and think that few of them could be under ſeven bolls; and ſtrong rank lint, which is moſt wanted in the country, ſamples whereof, with the affidavits of its growing on the moſs, we herewith ſend to the truſtees, as alſo ſamples of the barley and bear: and are convinced, by converſation with Mr. *Græme*, that theſe moſſes can yield flax of any quality, by varying the method of dreſſing the ſoil, and chuſing the ſeed for courſe or fine lint; tho' it would be too tedious here to demonſtrate theſe points; and all this upon moſs, ten and twelve feet deep.

Also potatoes, exceeding good, planted, hoo'd, and raiſed with his ſmall breaſt-plough; and this ſeems a better and more frugal method of dreſſing potatoes, than any way uſed in this country. There was wheat upon theſe fields laſt year, very good in the pickle, but thin and unequal, from being late ſown. Now we ſee large fields of wheat, early ſown, well dreſt, pretty thick and rank, before winter; and by his methods of plowing it down and rolling often, we make no doubt of its ſtanding the winter: and alſo of the rape, which is pretty rank and ſtrong juſt now, and planted with the plough; tho' we do not know much of rape, or uſe it, in this country.

In ſhort, his inſtruments and methods of huſbandry are as different from the common huſbandry of the country, as his ſoil is from the dry fields; but exceedingly well adapted for their uſes, and will in time, ſome of them, be uſed in all good huſbandry: only new things are too often the ſubject of ridicule and prejudices, too ſlow of being conquered. But after ſome deliberation, we look upon it as a ſolid improvement, the moſt juſt huſbandry, and of the greateſt national concern

concern, of any thing we have yet ſeen; when it is conſidered what a proportion of *Scotland* lies uſeleſs for want of that huſbandry and culture; *2dly*, how it would ſpread good huſbandry over many places of the kingdom; and, *laſtly*, how it could cultivate and improve the Highlands quickly, without much expence.

THESE moſſy vales at the bottoms of the hills, we are convinced, might produce good flax, and good potatoes. By Mr. *Græme*'s huſbandry, a man, with his pairing plough, can eaſily pair an acre in ten or twelve days; next burns it; then ſpreads the aſhes; and then plows it with his new breaſt-plough, without cattle; and, where cattle can go, two Highland ſhelties can do it. An acre thus dreſt in flax, is bread and employment for a family, the year round.

THE Highland eſtates now annexed to the Crown, could alſo be improved in this manner; and, we truly think, can be improven in no other way, tho' double the expence were employed: yet to explain and demonſtrate all this, would ſwell to too great a length.

WE

We wont be ſurpriſed, if the truſtees cannot be convinced of all this at the firſt: but we would earneſtly recommend it to them to ſend out ſome perſon or perſons, whoſe judgment they can truſt, to look over theſe fields, and to converſe with Mr. *Græme* on the ſpot, deliberately, not in a hurry; and the ſame chain of thought will ſteal upon them, like a demonſtration, after what they ſee, and the prejudice againſt novelties wears off. 2*dly*, We would recommend it to the truſtees, to have converſation with Mr. *Græme* upon that ſubject of raiſing flax in the Highlands; which we take to be an eſſential point for cultivating and improving the Highlands, or introducing the manufactures there.

We would have been wanting to ourſelves and our country, if we had not taken this method of informing the truſtees of what we think ſo eſſential to the good of the country, when they call upon us to do it, and when it is a thing that lies hid from the reſt of the kingdom, and is only yet known in this corner, and where too it has been much miſrepreſented by ſome that never ſaw it, from prejudices

and other cauſes: but when the truſtees have been better informed, by ſending people to look to thoſe fields, and that huſbandry; we make no doubt, they will take proper methods to make it better known, and to profit from it.

We think if Mr. *Græme* were countenanced in ſo laudable a thing, (which he has brought to ſo great a length) by getting a few of the troops to work at it; all the nation might profit from it in ſome way or other, but more particularly the Highlands, as is already hinted. *(Sic ſub.)*

Thomas Græme of *Duchray*, *J. P.*
James Fairfoull of *Braindam*, *J. P.*
John Buchanan of *Glins*, *J. P.*
John Campbell of *Kilpunt*, *J. P.*
John Stirling of *Garden.*
George Montgomery-Moir of *Leckie.*
John Callender of *Craigforth*, *J. P.*
David Græme of *Meiklewood.*

We

January 1754.

We whoſe names and deſignations are under-written, Gentlemen of the weſt ends of the ſhires of *Perth* and *Stirling*, having ſeriouſly and deliberately conſidered the improvements of the moſſes on the banks of the river *Forth*:

I. WE are of opinion, that it is the moſt ſolid improvement, of the greateſt conſequence to the whole nation, and the cheapeſt huſbandry, of any we have ſeen; for, after examining fully the whole procedure, we find an acre of it can be effectually dreſſed for forty ſhillings *Sterling*, to produce as good barley as we have ſeen upon any ſoil, particularly in the quality of the grain.

II. Now when we conſider and compare our own expence upon our outfield grounds, that yield three crops of oats in ſix years; if we are to bring thoſe fields into barley, in the clay grounds, we give five chalders of lime to the acre, or thereby; earth it well, fully

fully thicker than the moſs is done, and give it dung alſo with ſeveral plowings. In the dry fields, or lighter ſoils, we give the ſame management, only leſs lime, about three chalders to an acre; and we have no better barley, than we have ſeen upon the moſs, and frequently worſe. When we compare our expence with that of working the moſs, we find it near double the charge; which we are ſenſible of after a ſtrict examination into the moſs expence by the workmen, and what they can now undertake acres for.

III. The common and obvious objection to this is, that our grounds, after they are ſo dreſt, will laſt longer than the moſs: but this, we are alſo of opinion, is without foundation, built upon prejudice and miſtakes; as our grounds, after this courſe of huſbandry, muſt be kept in a conſtant ſucceſſion of barley, oats, and peaſe, with a repetition of earth and dung every third year or ſo; otherways they will not hold out to any advantage. Now, give the moſs a refreſhment of earth and aſhes every third year, and we are ſincerely of opinion, it will not only hold out longer, but improve every year by the advantage of the tillage and earth rotting the moſs into a loamy

black

black mould: beſides, this huſbandry of a little earth and aſhes every third year, is attended with no great expence; as theſe materials are every where at hand, and two ſmall ſhelties will plow it with eaſe; or a man, if the weather is wet.

In ſhort, we ſeriouſly and truly think it is the greateſt improvement that ever was attempted in this country, at leaſt in our time, and that it is a cheaper huſbandry than any of the ſoils around us can admit of; and, in that view, is of the greateſt conſequence, conſidering what quantity of thoſe barren fields are to be met with in *Scotland:* tho' we admit, that it may have coſt Mr. *Græme* more money at firſt, than the above computation, from his trying different experiments, and from the untractable nature of the country people, in working a new ſoil, and following methods of huſbandry, that they never ſaw practiſed before, when they had no faith in either, and were greatly prejudiced againſt both.

John Campbell of *Kinpunt.*
John Stirling of *Garden.*
John Buchanan of *Glins.*
George Montgomery Moir of *Leckie.*

John

JOHN CALLENDER of *Craigforth.*
THOMAS GRÆME of *Duchray.*
DAVID GRAHAM of *Meiklewood.*
JAMES FAIRFOUL of *Braindam.*
JOHN ERSKINE of *Carnock.*

N. B. What is ſaid in the ſecond paragraph of this paper, relates only to the uſual method of huſbandry, univerſally practiſed by our tenants in this part of the country, which tho' ſome of us don't abſolutely approve of, yet it was thought proper to be mentioned, that ſo the wide difference betwixt the expence in the two different methods of farming might more evidently appear.

ERRATUM.

Page 10. Line 7. for *bean*, read *bear.*

FINIS.